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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/026,171

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EXAMINER

MCDONOUGH, JAMES E

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

05/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/026,171	Applicant(s) AGAPIOU ET AL.	
	Examiner JAMES E. MCDONOUGH	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-10,14-22 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-10, 14-22, and 24-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 5, 6-10, 14, 15, 18-22, and 24-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razavi I (WO 96/35729) for the reasons of record given in the previous office actions and the reasons below.

Regarding claims 1, 3, 6-10, 14, 18-22, 24-32, and 34-38

Ravazi I teaches (table 4) that the metallocene and the activator can be combined at temperature up to 90 C and for times up to 120 minutes.

With respect to the temperature of step (b) of 30-75 C. It is noted that Razavi I teaches a temperature for this step from 85- 100 C, although this temperature is 10 C higher, the claimed temperature would have been the result of routine experimentation

Art Unit: 1793

by one of ordinary skill in the art in an effort to optimize the catalyst activity while reducing reactor fouling by taking into consideration the polymerization parameters (i.e time, temperature, reactor type, pressure, etc.). It is further noted however that the addition of one component that is up to 125 C to another components that is up to 75 C, will result in a new composition with a temperature higher than 75 C, assuming equal heat capacities and equal volume solutions the resultant temperature would actually be 100 C.

Regarding claim 5

The solubility of a catalyst in toluene is a property of the catalyst and as such is inseparable from the catalyst itself, and since the reference discloses catalyst that read on the instant invention, it would be expected to have these properties absent any evidence to the contrary.

Regarding claim 15

Razavi I teaches the catalyst is a dried solid (abstract) and further teaches that the product is a free flowing powder (page 10, line 35).

Regarding claim 33

Although, Razavi I does not teach the claimed drying temperature, Razavi I does disclose drying the product, however, the claimed drying temperature would have been the result of routine experimentation by one of ordinary skill in the art in an effort to optimize the catalyst activity while reducing reactor fouling by taking into consideration the polymerization parameters (i.e time, temperature, reactor type, pressure, etc.), absent any showing of unexpected results.

Claims 16 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Razavi I (WO 96/35729) as applied to claims 1, 3, 5-10, 14, 15, 18-22, 24-432, and 34-38 above, and further in view of Lee et al. (USP 5,367,037).

Although, Razavi I is silent as to whether the catalyst is reslurried in mineral oil, Razavi does disclose/suggest the rest of the limitations of the claims, however, because Lee teaches that it is preferable to add the catalyst as either a solid or a mineral oil slurry, it would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Razavi I, by incorporating the catalyst as a mineral oil slurry, as suggested by Lee, with a reasonable expectation of success.

Claims 1, 3, 5-10, 14-22 and 24-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uwai (USP 6,420,501) as cited in and for the reasons of record given in paragraph 5 of the Office action dated 11/14/2006 and the reasons below.

Regarding claims 1, 3, 6-10, 14, 18-22, 24-32, and 34-38

Uwai teaches (table 1) that the metallocenes and activator can be combined at temperatures up to 100 C and for times up to 60 minutes.

With respect to the temperature of step (b) of 30-75 C. It is noted that Uwai teaches a temperature for this step of 100 C, although this temperature is 25 C higher, the claimed temperature would have been the result of routine experimentation by one of ordinary skill in the art in an effort to optimize the catalyst activity while reducing

Art Unit: 1793

reactor fouling by taking into consideration the polymerization parameters (i.e time, temperature, reactor type, pressure, etc.). It is further noted however that the addition of one component that is up to 125 C to another components that is up to 75 C, will result in a new composition with a temperature higher than 75 C, assuming equal heat capacities and equal volume solutions the resultant temperature would actually be 100 C.

Regarding claim 5

The solubility of a catalyst in toluene is a property of the catalyst and as such is inseparable from the catalyst itself, and since the reference discloses catalyst that read on the instant invention, it would be expected to have these properties absent any evidence to the contrary.

Regarding claim 15

Uwai teaches drying the solid catalyst (column 17, lines 64-67).

Regarding claim 33

Although, Uwai does not teach the claimed drying temperature, Uwai does disclose drying the product, however, the claimed drying temperature would have been the result of routine experimentation by one of ordinary skill in the art in an effort to optimize the catalyst activity while reducing reactor fouling by taking into consideration the polymerization parameters (i.e time, temperature, reactor type, pressure, etc.), absent any showing of unexpected results.

Claims 16 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Uwai (USP 6,420,501) as applied to claims 1, 3, 5-10, 14, 15, 18-22, 24-432, and 34-38 above, and further in view of Lee et al. (USP 5,367,037).

Although, Uwai is silent as to whether the catalyst is reslurried in mineral oil, Uwai does disclose/suggest the rest of the limitations of the claims, however, because Lee teaches that it is preferable to add the catalyst as either a solid or a mineral oil slurry, it would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Uwai, by incorporating the catalyst as a mineral oil slurry, as suggested by Lee, with a reasonable expectation of success.

Response to Arguments

Applicants argue against examiners contention that the declarations are not persuasive. Examiner does note the color photographs presented by applicants, as the original black and white were not discernable.

Applicants argue against examiner assertion that the experiment did not use the closest parameters between the two disclosures. This is not persuasive as the references teaches a temperature up to 100 C and the experiment only used room temperature, further the instant claims teach a temperature from 60 to 125 C, but in the experiment 85 C was used as the temperature, clearly this is not a comparison of the closest parameters of the two references, contrary to applicants assertion that they

were essentially identical. Therefore it can not be seen how applicant's results are unexpected.

Applicants argue against the art rejections.

Applicants argue that since the references fail to disclose that changing the temperature will affect the polymer, that this is not a result effective variable. This is not persuasive because it is well known in the art that almost any change in a catalyst will bring about changes in the polymer produced, however, the question is not whether a difference in temperature will bring about a change in the polymer, the question is are these results unexpected, and since the reference does teach adjusting the temperature, one skilled in the art would expect a change as a variable has been changed, absent evidence of some criticality. Furthermore, table 4 from Razavi shows mixing the metallocene and activator for up between 60 to 120 minutes and up to 90 C, and shows reactor fouling is better when mixed at 90 C vs. being mixed at 70 C, and Table 1 from Uwai shows reaction times and temperatures up to 60 minutes and 100 C. This teaching clearly contradicts applicant's arguments that the references fail to teach the heating step or the time period for that step.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES E. MCDONOUGH whose telephone number is (571)272-6398. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry A Lorengo/
Supervisory Patent Examiner, Art Unit 1793

JEM 4/22/2008